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09/726,884	11/30/2000	Hikmet Senay	36287-00101	1467

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EXAMINER
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ROBINSON BOYCE, AKIBA K

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/726,884

Applicant(s)

SENAY ET AL.

Examiner

Akiba K Robinson-Boyce

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

1. Due to communications filed 11/30/00, the following is a first non-final office action. Claims 1-17 are pending in this application and have been examined on the merits. Claims 1-17 are rejected.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of :

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful art" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory

subject matter. For a process claim, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, claim 1 is directed to a method for efficiently managing fungible items. Claim 1 recites the steps of "collecting interaction data", "processing said collected interaction data with connectivity and diversity measures", and "displaying said processed interaction data and appropriate raw interaction data for interaction analyses". While these steps recite a useful, concrete, and tangible result, they lack technology or apparatus to perform the steps of the method. Since no technology or apparatus exists for performing these steps, claim 1 and all claims that depend from it are therefore found to be non-statutory.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1,16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Nizzari et al (US 6,014,647).

As per claim 1, Nizzari et al discloses:

Collecting interaction data, (Col. 9, lines 38-40, [accessing information related to interactions]);

Processing said collected interaction data with connectivity and diversity measures, (Col. 9, lines 41-49, lines 52-60, [storing and retrieving the personalized information in the interaction database and interacting with the customer according to the information retrieved from the database, where connectivity is represented by the communication occurring over a telephone channel and diversity is represented by the communication occurring over a data channel where the data channel is a data network]);

Displaying said processed interaction data and appropriate raw interaction data for interaction analyses, (Col. 9, lines 50-51, [presenting the customer information to the operator]).

As per claim 16, Nizzari et al discloses:

Generating a report based on results o the interaction analysis, (Col. 5, lines 8-14, [summary of recent interactions]).

As per claim 17, Nizzari et al discloses:

A computer, (Col. 3, lines 46-50, [online computer application]);

A database electronically coupled to said computer for storing interaction data, auxiliary information and any additional data derived from said interaction data, (Abstract, lines 3-6, [interaction database], Col. 4, line 66-Col. 5, line 6, lines 24-27, Fig. 2, [shows that application 210, {which can include a module of an online application} is coupled to and provides information to the interaction tracking database

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A set of programs for accessing interaction data and generating views dynamically, (Col. 5, line 5, lines 11-14, [retrieval service module 220 is shown to access information and provide it to the application which can be an online application {eg. Web Browser that can display the information})).

A display screen electronically coupled to said computer for providing a user interface, said user interface providing appropriate controls for displaying and interactively manipulating each generated view, (Col. 1, lines 16-18, [computer screen]);

A user input device electronically coupled to said computer, (Col. 3, lines 43-46, [keypad]);

A user selectable element of said user interface being responsive to user input via said user input device to generate a report based on analysis results, (Col. 3, lines 43-46, [shows account information is received via manual input], Col. 5, lines 8-11, [requesting a summary where the summary includes customer account information and represents the report]).

The following is inherent with Nizzari et al's system because Nizzari et al discloses that the system is implemented on a computer which, according to Merriam Webster's Dictionary is a programmable electronic device that can store, retrieve, and process data. In order to process the data, a microprocessor is needed and in order to store the data, a storage unit is needed:

having a microprocessor and a storage unit

The following is also inherent with Nizzari et al since Nizzari et al discloses that the system is implemented on a computer and in order for the computer to utilize a step by step procedure to properly process the information, the system would need the following:

Algorithms stored in said storage unit and operable by said microprocessor for measuring connectivity and diversity of entities based on their interactions.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-5 and 10-13,15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nizzari et al (US Patent 6,014,647), and further in view of Johnson et al (US Patent 5,964,839).

As per claim 2, Nizzari et al fails to disclose: Wherein said collecting interaction data comprises use of network surveys. Nizzari et al would have collected data comprising the use of network surveys with the motivation of easily accessing customer interaction data.

However Johnson et al discloses: Wherein said collecting interaction data comprises use of network surveys in Col. 1, line 55-Col. 2, line 7 in an analogous art for the purpose of accumulating data regarding customers.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise use of network surveys because surveys are conventional, traditional and effective methods for collecting data. A survey allows information to be comprehensively viewed or considered. Incorporating Johnson et al's network survey into Nizzari et al would show that a survey could be used to easily access customer interaction data.

As per claim 3, Nizzari et al fails to disclose: Monitoring e-mail traffic. Nizzari et al would have monitored e-mail traffic with the motivation of accessing customer interaction with the e-mail network.

However Johnson et al discloses Monitoring e-mail traffic in Col.2, lines 53-65 in an analogous art for the purpose of collecting user interaction data.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise monitoring e-mail traffic because the e-mail system is a conventional and common form of data communication in a network. By monitoring e-mail, one can effectively obtain a great amount of data on a consistent basis. Incorporating monitoring e-mail traffic from Johnson et al into Nizzari et al would show that collecting and analyzing e-mail data could be used to determine customer interaction data.

As per claim 4, Nizzari et al fails to disclose Monitoring of telephone traffic.



Nizzari et al would have monitored telephone traffic with the motivation of accessing customer interaction with a telephone network.

However Johnson et al discloses Monitoring of telephone traffic in Col. 1, lines 24-29 in an analogous art for the purpose of collecting user interaction data.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise monitoring of telephone traffic because the telephone system is a conventional and common form of data communication. By monitoring a telephone system, one can effectively obtain a great amount of data on a consistent basis. Incorporating monitoring telephone traffic from Johnson et al into Nizzari et al would show that collecting and analyzing telephone traffic data can be used to determine customer interaction data.

As per claim 5, Nizzari et al fails to disclose Monitoring of access to shared resources. Nizzari et al would have monitored access to shared resources with the motivation of accessing customer interaction in a shared resource network environment.

However Johnson et al discloses Monitoring of access to shared resources in Col. 6, lines 23-34 in an analogous art for the purpose of collecting user interaction data.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise monitoring of shared resource data because in a shared resource network, information and data is constantly being used by different sources. Information from these sources can supply a great amount of data on a consistent

basis. Incorporating monitoring shared resource data from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction with those resources.

As per claim 10, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating an organization view. Nizzari et al would have generated an organization view with the motivation of accessing customer interaction throughout an entire organization.

However, Johnson et al discloses Wherein said displaying said processed interaction data comprises generating an organization view in Col.12, lines 32-41 in an analogous art for the purpose of collecting and monitoring customer interaction data amongst a plurality of users.

It would have been obvious to one of ordinary skill in the art to generate an organization view with the motivation of producing a visual representation that shows interactions amongst members of an organization. Incorporating the generation of the organizational view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction amongst a plurality of users in an organization.

As per claim 11, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating a group view. Nizzari et al would have generated a group view with the motivation of using the customer interaction data to visually show the data for an entire group.

However Johnson et al discloses Wherein said displaying said processed

interaction data comprises generating a group view in Col.12, lines 32-41 and Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer interaction data amongst a plurality of users.

It would have been obvious to one of ordinary skill in the art to generate a group view with the motivation of producing a visual representation that shows interactions amongst members of a particular group. Incorporating the generation of the group view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction amongst a plurality of users in a group.

As per claim 12, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating an individual view. Nizzari et al would have generated a group view with the motivation of using the customer interaction data to visually show the data for an individual user.

However Johnson et al discloses Wherein said displaying said processed interaction data comprises generating an individual view in Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer interaction data for an individual user.

It would have been obvious to one of ordinary skill in the art to generate an individual view with the motivation of producing a visual representation that shows interactions for an individual user. Incorporating the generation of the individual view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction for an individual user.

As per claim 13, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating a cluster view. Nizzari et al would have generated a cluster view with the motivation of using the customer interaction data to visually show the data for a particular cluster.

However Johnson et al discloses Wherein said displaying said processed interaction data comprises generating a cluster view in Col.12, lines 32-41 and Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer interaction data for a particular cluster.

It would have been obvious to one of ordinary skill in the art to generate a cluster view with the motivation of producing a visual representation that shows interactions for a particular cluster. Incorporating the generation of the cluster view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction for a particular cluster.

As per claim 15, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating a topical view. Nizzari et al would have generated a topical view with the motivation of using the customer interaction data to visually show the data for a particular area of interest.

However Johnson et al discloses Wherein said displaying said processed interaction data comprises generating a topical view in Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer interaction data for a particular area of interest.

It would have been obvious to one of ordinary skill in the art to generate a cluster

view with the motivation of producing a visual representation that shows interactions for a particular cluster. Incorporating the generation of the cluster view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction for a particular cluster.

8. Claims 6-9, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nizzari et al (US Patent 6,014,647), and further in view of Herz (US Patent 6,029,195).

As per claims 6, 8, Nizzari et al fails to disclose Wherein said connectivity/diversity measure is a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities. Nizzari et al would have utilized a recursive mathematical algorithm with the motivation of calculating interaction data for customers of the system.

However Herz discloses Wherein said connectivity/diversity measure is a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities in Col. 60, lines 49-52 in an analogous art for the purpose of calculating how much files are accessed by multiplying by a decay factor.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate the decay factor of Herz into Nizzari's system with the motivation of determining the rate that interactions are decreasing with respect to customer interactions.

As per claim 7, neither Nizzari et al nor Herz disclose the specific formula:

Wherein said connectivity measure employs the following mathematical formula...

Where  $C(E, L)$  denotes connectivity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions,  $w(k)$  is the weight of direct interactions from  $k$ , and  $fd$  is the decay factor.

However, the above mentioned formula is obvious with Herz since Herz does disclose that the user interest for accessing files is estimated in Col. 60, lines 53-58, for the purpose of calculating how much files are accessed by multiplying by a decay factor where in this case, the user interest for accessing files represents the connectivity measure.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize connectivity formulas with the motivation of determining or estimating the user's interest and successfully analyzing the user's interaction.

As per claim 9, neither Nizzari et al nor Herz disclose the specific formula:

Wherein said diversity measure employs the following mathematical formula...  
Where,  $D(E, L)$  denotes diversity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions, and  $v(k, p) = 0$  if the property of  $k$  along the diversity dimension of interest is already within  $p$ , where  $p$  is a set of properties encountered so far, including the property of  $E$  or otherwise,  $v(k, p) = 1$ .

However, the above-mentioned formula is obvious with Herz since Herz does disclose that the file with the lowest weight [file that user accessed less] is determined (Col. 60, lines 53-58, [where the low weight for accessing a file represents the diversity measure]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize diversity formulas with the motivation of determining or estimating the user's interest and successfully analyzing the user's interaction.

As per claim 14, Nizzari et al fails to disclose Wherein displaying said processed interaction data comprises generating a people map where said connectivity and diversity measures for predefined units are represented graphically. Nizzari et al would have generated a people map with the motivation of using the customer interaction data to visually represent the data for a people in the system in map view.

However Herz discloses Wherein displaying said processed interaction data comprises generating a people map where said connectivity and diversity measures for predefined units are represented graphically in col. 8, lines 39-47 in an analogous art for the purpose of predicting the information consumption patterns of a user.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate the people map of Herz into Nizzari et al with the motivation of using the people map to visually represent customer interaction data.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

QRB

A. R. B.  
February 6, 2004

  
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